

Multimedia University



Product Used MyMathLab (MML)
Course Name Algebra & Trigonometry
Credit Hours Four

Textbook in Use

Algebra & Trigonometry, 8e, Michael Sullivan

Course Implementation

Course Design

Centre for Foundation Studies and Extension Education (FOSEE), Multimedia University (MMU) redesigned the assessment of Algebra & Trigonometry course from a traditional paper-based quiz and paper-based assignment to e-assessment by adopting MyMathLab as a self-test e-assessment tool. The redesigned course was offered in both blended and traditional lecture and tutorial formats.

A demonstration session was conducted at the beginning of the academic year to familiarize students with MML system so that they were prepared to use the system for assessment.

Face-to-face lecture class was held four hours per week with one hour of face-to-face tutorial class. Students were encouraged to work through the Study Plan at a self-paced mode to reinforce practice after a topic was covered in the traditional lecture and tutorial class. For this purpose, students were afforded unlimited attempts until they mastered and fully understood how to solve the problem.

Assessments

30 percent	e-assessment (MyMathLab)
20 percent	mid-term test (formal paper-based test)
50 percent	final examination (formal paper-based examination)

Use of MyMathLab

Three quizzes and three assignments were created by the instructor. Students were given three attempts to solve each quiz and assignment which consisted of 15 questions within two weeks. MyMathLab contributed 30 percent to a student's final course grade.

Results and Data

A five-point Likert scale questionnaire with (5) strongly agree, (4) agree, (3) neutral, (2) disagree and (1) strongly disagree as anchoring points which was adapted from "Making The Grade, Version 3" was used. Means (μ) and percentage of descriptive statistics were used for data analysis to determine the level of students' perceptions on each item as shown in Table 1.

TABLE I: STUDENTS' PERCEPTION AND SATISFACTION

Items	5	4	3	2	1	μ
Easy to use	30.9%	31.8%	5.3%	12.4%	19.6%	3.42
Helped me learn mathematics	46.0%	35.1%	4.0%	5.1%	9.8%	4.02
Became a better problem solver.	38.5%	35.6%	2.4%	6.2%	17.3%	3.72
Helped me learn the material.	13.1%	36.9%	45.8%	2.4%	1.8%	3.60
Online feedback and results was helpful.	29.8%	47.1%	21.8%	1.1%	0.2%	4.10
Helpful to rework the wrong problems.	54.0%	37.3%	4.7%	2.2%	1.8%	4.40
Helpful to know mistake upon submission.	52.9%	32.9%	11.1%	2.9%	0.2%	4.35
Understand the subject better.	12.7%	50.6%	32.4%	2.4%	1.8%	3.70
Satisfied.	8.0%	55.3%	30.0%	4.7%	2.0%	3.60
Will use MML in next course.	41.5%	28.7%	8.7%	6.9%	14.2%	3.76
Will recommend to other students.	42.5%	28.5%	8.4%	7.3%	13.3%	3.79
						3.86

Conclusions

This study provides data on an initial attempt to incorporate online learning and assessment in a traditional face-to-face class, shifting to the mode of blended learning. Encouraging results were obtained as participants rated the use of MML quite positively. They felt that MML system is flexible and helpful. They highly appreciated the instant grading feature upon submission and the ability to rework a problem if they were wrong. The feedback feature has been a great help to them in the self-paced learning. Overall, students were quite satisfied with the system. For more details, see *C.Y. Law et al., Students' Perceptions of MyMathLab: An Online Learning Management System, Proceeding of the 2012 International Conference on e-Education, e-Business, e-Management and e-Learning (IC4E 2012)*. A journal paper is also available online in the *International Journal of e-Education, e-Business, e-Management and e-Learning* at <http://www.ijeeee.org/abstract/075-Z00058F00022.htm>.

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